

# AN UNDESCRIBED SPECIES OF *MASTICHODENDRON* (SAPOTACEAE) FROM BARBADOS AND ANTIGUA

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(With Plate 1)

IN 1937 one of us (H.E.B.) collected a specimen of a Sapotaceous tree in Antigua which was evidently a species of *Mastichodendron*. The specimen consists of leafy twigs, together with seeds picked up beneath the tree, which is the only known example of the species in the island. The specimen could not be matched with any described species in this or any related genus, but it resembles three specimens in the Sloane Herbarium, preserved in the Department of Botany of the British Museum, which were collected in the late seventeenth century. One of these early specimens was collected by Sloane in Barbados in 1687 (*Herb. Sloane*, vol. 7, fol. 62) and seeds are preserved separately in Sloane's collection of seeds and fruits (items No. 1430 and 1593, mixed in one box; a third specimen of the fruits, catalogued as No. 9275, cannot be traced). A second specimen (*Herb. Sloane*, vol. 184, fol. 54) was collected in Barbados by James Reed in, or before, 1692. The third specimen, which in some ways is the best preserved, fruit and seed being mounted with a leafy twig, was in Plukenet's Herbarium before it was acquired by Sloane. Unfortunately Plukenet did not record the collector or place of origin of the specimen.

Except for misidentifications with *Mastichodendron foetidissimum* no binomial appears to have been applied to this plant, and though mentioned in several pre-Linnean works it has been lost sight of until re-collected in Antigua in 1937.

The first certain reference to the tree in botanical literature was by Plukenet in 1691, when he figured the specimen in his own herbarium (*Phytograph.*, tab. 217, fig. 5) with the name *Prunifera vel nucifera seu nuci-prunifera arbor Americana praeclsa, angustis laurifoliis, laete virentibus. Mastichen odoratum fundens*. In his *Almagestum Botanicum* (1796) he referred to it as the 'Masticke Tree'; this name with or without the Latin phrase name was taken up by Sloane (*Cat. Pl. Jam.*: 180 (1696) and *Nat. Hist. Jam.*: 40 (1707)), by Ray (*Hist. Pl.*: 42 (1704)), and by Petiver in *Petiveriana*: 3 (1716). Sloane gave the following first-hand account of the tree in *Nat. Hist. Jam.*: 40.

'This is one of the largest trees, and highest of the Island of Barbados, where it grows every where, and is in use for all sorts of buildings. The twigs were brown and smooth, having leaves with very short, if any foot-stalks, being themselves about three inches long and about an inch broad in the middle where broadest, and whence it decreases to both extremes, being of a very curious green colour, smooth and shining, somewhat like to Bay-leaves, having one middle, and several transverse nerves running very curiously through the leaf, which is hard and not succulent. The fruit was a turbinated small plum of the bigness and shape of a Hazel-nut, having

under a membrane of thin pulp, covering a very large and smooth stone, which is hard, and includes a white kernel. It grew every where in the Island of Barbados.'

Both Sloane and Plukenet attempted to identify this Mastic tree of Barbados with trees mentioned by earlier travellers. Plukenet's references to Garcia and Acosta are evidently mistaken, these referring to a species of *Eugenia* (see Markham's translation of Garcia da Orta, *Simples and Drugs of India* (1913)). The reference to the 'Masticke' tree in John Smith's *Travels and Observations* (1630: 55) relates to the island of St. Christopher and probably to the more widely spread *Mastichodendron foetidissima* (Jacq.) H. J. Lam.<sup>1</sup> We are unable to interpret de Laet's reference to Mastyché (*Americae utrisque descriptio*, lib. 15, cap. 8, p. 560, 1633) and no indication of locality is given. Ligon (*True and Exact Account of the Island of Barbados*, 1657) gives a first-hand account of the 'Mastick Tree' (pp. 14 and 73), but his description cannot be linked certainly with the tree described and collected by Sloane. As he himself admits, his account of the fruit is puzzling, but it agrees with the apparently independent description by Hughes (*Nat. Hist. Barbados*, 1750: 149). The two descriptions suggest that the tree may have been subject to attack by a gall-forming insect or a witches-broom fungus.

An account of the transference of the name Mastic from certain old-world gum-bearing trees to trees in the new world with similar properties is given in the *New English Dictionary* (Oxford, 1908).

One hundred and forty-three years after Sloane described the abundance of the tree, Maycock in his *Flora Barbadosensis* (1830) wrongly identified the tree with *Sideroxylon mastichodendron* Jacq. (a synonym of *Mastichodendron foetidissimum*) and stated that 'this valuable timber tree which was once so common in Barbados, is now very rarely to be seen'.

Schomburgk (*History of Barbados*, 1847) referred to the 'Mastick tree' as *Bumelia Mastichodendrum* Roem. & Schult. F. Hardy, writing in 1932 (*Agric. J., Barbados* 1 (3): 40), referred to 'an occasional specimen of Mastic (*Bumelia Mastichodendron* (?)) in Foster-Hall Wood, St. Joseph Parish, Barbados'.

In reply to an inquiry, Dr. A. E. S. McIntosh, Assistant Director of Agriculture, Barbados, wrote under date 10 May 1939:

'In my plant collecting for the local Museum I have not come across any species of the genus (*Sideroxylon*) although I am aware of Hardy's reference to the 'Mastic' tree as growing in the eastern part of Upper Foster Hall Wood. It is probable, however, that there may still be one or two isolated trees, although it is curious that in the herbarium of our Department made by the late Mr. J. R. Bovell, there are no sheets of *Sideroxylon* or its synonymous genera.'

The species is not represented in the Kew Herbarium, nor does it appear to be known in the U.S. National Herbarium at Washington. So far as we have been able to ascertain the only specimens known are those from Barbados in Sloane's Herbarium and the recent specimen from Antigua. The available evidence suggests that this species was endemic in Barbados, and by its absence from any of the intervening

<sup>1</sup> We attribute this combination to Lam and not Cronquist (see *Lloydia*, 9: 244, 1946); Lam's use of the generic name *Mastichodendron* was valid as the group which he raised to generic rank (*Méd. Bot. Mus. Rijks univ. Utrecht*, 65: 521, 1939) had, in fact, been described by Engler (*Pflanzenfam.* 4 (i): 144, 1891) as a section *Mastichodendron* of *Sideroxylon*.

islands it may be concluded that it was introduced there from Barbados about 1695 when many settlers from Barbados arrived in Antigua under Sir Christopher Codrington. The tree, which is the only one known on the island, was growing in second-growth mesophytic woodlands in a ravine above Dark Valley, on the western slopes of Boggy Peak, at an altitude of about 350 feet.

The material available is insufficient for a full description, but as additional material is not likely to come to hand, and as it is essential to have a name by which to refer to this once well-known and important tree, we append the following description.

**Mastichodendron sloaneanum** Box & Philipson, *sp. nov.*

*Sideroxylon mastichodendron* (non Jacq.) Maycock, *Fl. Barbad.*: iii (1830).

*Bumelia mastichodendrum* (non Roem. & Schult.) Schomburgk, *Hist. Barbad.*: 609 (1847).

*Arbor* alta ramulis novis et gemmis aureo-pubescentibus. *Folia* alterna glabra; petiolus brevis canaliculatus 5–12 mm. longus; lamina oblanceolata, basi attenuata, apice acuminata obtusa, c.  $13 \times 3.5(5)$  cm., margine crispa, costa conspicua subtus prominenti, nervis lateralibus utrinsecus c. 12. *Flores* adhuc ignoti. *Fructus* c.  $20 \times 15$  mm. *Semen* oblongo-ellipsoideum vel obovoideum subcompressum; cicatrix basilateralis c.  $5-6 \times 4-5$  mm., infra areolam elevatam obovatam sulco longitudinali percursam posita.

BARBADOS: Sloane, 1687. Type in *Herb. Mus. Brit.* (twigs in *Herb. Sloane*, vol. 7, fol. 62; fruits in Sloane Col. No. 1430 and 1593). Reed, c. 1692 (*Herb. Sloane*, vol. 184, fol. 54). Specimen in Plukenet's Herbarium, probably from Barbados in seventeenth century (*Herb. Sloane*, vol. 97, fol. 126).

ANTIGUA: Box, 809: Dark Valley below Boggy Peak, May 1937.

This species differs from *M. foetidissimum* (Jacq.) H. J. Lam by the shorter, thicker petiole and the more lanceolate leaf-blade, which tapers more gradually into the petiole than is typical of *M. foetidissimum*. The material collected in Antigua has slightly broader leaves and longer petioles than the Barbados gatherings, but appears conspecific with them.



PRESENTED

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PLATE I

- (a) Type specimen of *Mastichodendron sloaneanum* Box & Philipson,  
*Herb. Sloane*, vol. 7, fol. 62.
- (b) Seed of *M. sloaneanum* in Sloane's collection of fruits.



FIG. 1. Type Specimen of *Mastichodendron sloaneum* Box & Philipson



FIG. 2. Seeds of *Mastichodendron sloaneum* (nat. size)